

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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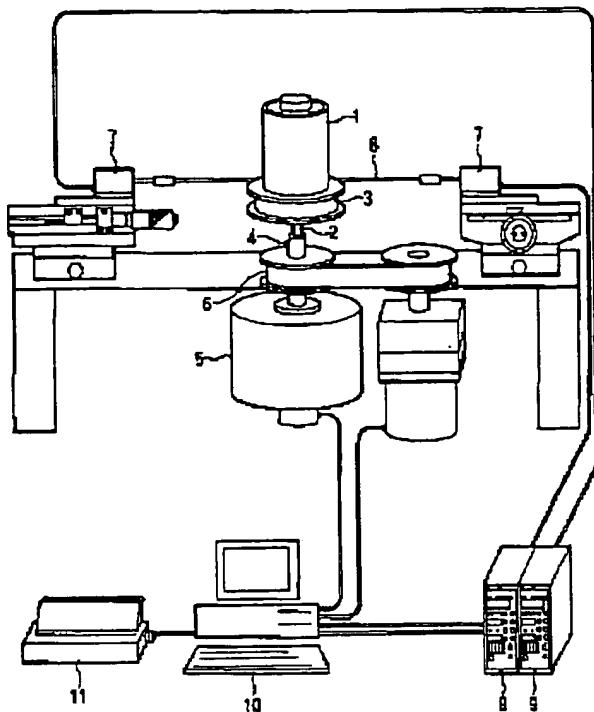
APPLICATION DATE : 29-09-92  
APPLICATION NUMBER : 04283670

APPLICANT : CANON PRECISION INC;

INVENTOR : MORIYA AKIRA;

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**TITLE : APPARATUS AND METHOD FOR COGGING TORQUE OF MOTOR**



**ABSTRACT :** PURPOSE: To easily obtain a T-.theta. characteristic measured with high accuracy with being less influenced by a coupling loss by a method wherein a torque is converted to a linear force and further converted to an electric signal by means of a weight sensor to detect a relative position between a stator and a rotor.

**CONSTITUTION:** An axle 2 of a motor 1 to be measured is attached to a chucking device 4 so that the calibration of two load cells 7 is carried out. A string 8 is fitted to the two cells 7, wound on a pulley 3 and pulled to the opposite sides. An output of a dynamic strain measuring device 9 is be operated by a computer 10 through an A/D board and the result is printed out by a printer 11. In response to the instruction from the computer 10, the axle 2 is slowly rotated by a belt-driving device 6. A relative position at that time between the rotor and the stator is detected by means of an encoder 5 to be sent to the computer 10 as a position information. Indication values of the measuring device 9 in accordance with predetermined positions are inputted to the computer so that a cogging torque  $T$  is determined. Then, the axle 2 of the rotor is rotated by one revolution, thereby obtaining a  $T$ - $\theta$  characteristic.

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